

IN SENATE OF THE UNITED STATES.

FEBRUARY 19, 1853—Ordered to be printed.

Mr. WALKER made the following

REPORT:

[To accompany an amendment intended to be proposed to the act (H. R. 336) "making appropriation for the support of the army for the year ending June 30, 1854."]

The select committee, to which were referred the various memorials in regard to the discovery of the means by which the human body is rendered uniformly and safely insensible to pain under surgical operations, has had the subject under consideration, and now report :

That in the opinion of the committee such a discovery has been made, and that the credit and honor of the discovery belong to one of the following persons, all citizens of the United States, to wit: William T. G. Morton, Horace Wells, deceased, or Charles T. Jackson; but to which of these persons in particular the discovery should be awarded, the committee is not unanimous, and consequently the committee is of opinion that this point should not be settled by Congress without a judicial inquiry.

But the committee has no hesitancy in saying, that to the man who has bestowed this boon upon mankind, when he shall be certainly made known, the highest honor and reward are due which it is compatible with the institutions of our country to bestow.

The means of safely producing insensibility to pain in surgical and kindred operations have been the great desideratum in the curative art from the earliest period of medical science, and have been zealously sought for during a period of more than a thousand years. At various periods, and in various ages, hope has been excited in the human breast that this great agent had been found; but all proved delusive, and hope as often died away, until the discovery now under consideration burst upon the world from our own country, and in our own day. Then, and not until then, was the time-cherished hope realized that the knife would lose its sting, and that blood might follow its edge without pain.

But for the committee to dilate upon the importance of this discovery were futile indeed. The father or mother who has seen a child, or the child who has a father or mother, upon the surgeon's table, writhing and shrieking from pain and agony—the husband who has seen his wife suffering, perhaps dying, un-

der the undurable pangs of parturition, the extirpation of a breast or cancer, or the amputation of a limb, while she appealed and implored for help and ease which he could not otherwise render—the commander who has seen his soldiers, and the soldier who has seen his companion, sink, nervously shocked to death from pain, in the absence of this alleviation—and the surgeon who is forced to torture, while, perhaps, he weeps—can all more redily feel the magnitude and blessing of this discovery than the committee can describe it. Indeed, while the heart of man shall remain human, or possess the power to pulsate in sympathy with human suffering, it would seem that none would deny it the meed of pre-eminence among the discoveries of any age.

Leaving, therefore, the importance of the discovery, as a matter conceded by all, the committee will proceed to the consideration of another inquiry, which is—has Congress the constitutional power to grant pecuniary reward for the use and benefit of the discovery, had and derived by the Government in its military and naval service, its hospitals, and asylums?

Were this an original question, or one presented for the first time, it would seem that very little reflection ought to satisfy the most jealous objector that such a power is possessed by Congress. Were it not so, the Government might become the veriest laggard in every species of progress; or, to escape that difficulty, must become the worst and only resistless pirate upon the rights, inventions, and discoveries of its citizens. For instance: an invention in mechanical, or a discovery in physical science is made. By its use, private individuals and governments, *having* the power to avail themselves of it, transmit a message in a minute, which would otherwise require a week; propel a ship to a given point in a week, which, without the availed discovery, would require a month; send their agents or soldiers to a point in a day, which could not be reached, formerly, in twenty; or print matter in an hour, which formerly required a day: while our Government, not possessing the rightful power to avail itself of the invention or discovery, must necessarily lag behind private individuals and all other Governments, whether in peace or war, and move on in the old and slothful paths; or it must do by piracy, or usurpation, what it is alleged it cannot do constitutionally—infringe the private rights of its citizens, and avail itself by *might* of that which it cannot obtain by the exercise of rightful power. But, before it can do even this, it must be first conceded that the Government can reach an unconstitutional but necessary end by means of a constitutional wrong. The bare proposition involves so plain a solicism, that serious consideration of it is precluded.

As an original and open question, then, the committee would be of opinion that Congress does possess the power to avail itself of the use of the discovery under consideration; or having had, and still having the use and benefit of it, can rightfully grant a reward for that use and benefit.

But the committee cannot view the question of power as an original or open one. The time is too long, and the instances are too numerous, in which the power has been exercised, to allow of its being so considered. A list of some of the cases in which the power in question has been exercised, will be found appended to this report; but the committee will here allude to a class of cases involving the power to the extreme limit—cases in which the Government has even stood forth to assist private individuals, with money, in their efforts to make and perfect their discoveries and inventions: such, for instance, as the cases of Professors Morse, Page, and Espy.

The committee being of opinion that this discovery is eminently meritorious, and its use by the Government of vast and incalculable value and benefit, have concluded to recommend to the favorable consideration of the Senate the accompanying provision, by way of amendment to the army appropriation bill.

[This proposition gives \$100,000 to the discoverer.]

Views of the Chairman on "An Examination of the Question of Anæsthesia."

While the question of anæsthesia, on the memorials of sundry persons, was under consideration by the Select Committee of the Senate, of which I was Chairman, a paper entitled "AN EXAMINATION OF THE QUESTION OF ANÆSTHESIA," prepared by the Hon. Truman Smith, a member of the Committee, and having thus a *quasi* official character, was printed and circulated among the members of the Senate and House of Representatives. And as, in my opinion, that paper presents a one-sided and partial view of the question; such as might be expected of an advocate of easy faith in his client's cause, and strong indignation against all that oppose it; and consequently comes to a conclusion widely different from that which a calm and impartial consideration of the whole case would warrant, I deem it an act of mere justice to the person who I believe has the right, to present also the opinion which I have formed upon the same points after a careful examination.

The writer of that paper gives the whole merit of the discovery of practical anæsthesia to the late Dr. Horace Wells, of Hartford, Connecticut, and he denounces, in no measured terms, as pirates and impostors both the other claimants to that distinguished honor. He is especially bitter and abusive of Dr. Morton, whose character is above all reproach, and whose claim to the contested prize is supported by very strong evidence, while he shows some little forbearance towards Dr. Jackson, who has failed in making out his claim. The strength of his denunciations against the respective parties, and the degree of villany which he imputes to them is in direct proportion to the strength of their proofs.

I feel no interest or wish in this matter, except that the truth may be arrived at, and right and justice done; and that I may discharge faithfully the duty which the Senate has imposed on me by the reference, by endeavoring to obtain it, and present it. And it is but fair to say, in the outset, that, after a careful examination of all the allegations and proofs to which I have had access, my mind is made up—my opinion formed on the question—and that I concur with the Board of Trustees of the Massachusetts Medical Hospital in the opinion expressed in their report of January 26th, 1848, and with the two committees of the House of Representatives of 1849 and 1852, that Dr. W. T. G. Morton first discovered and brought into general use a safe, certain, and efficient anæsthetic agent, applicable generally to all dentrical, surgical, and obstetrical cases, and that he is entitled to whatever honor and reward are due to the discovery, and the free and general use of it, by the army and navy of the United States, by the country, and by the civilized world.

Dr. Wells not the original conceiver of Anæsthesia.

He was, however, by no means the first that “*formed a distinct conception of anæsthesia.*” Nor was Dr. Horace Wells, or Dr. C. T. Jackson. If we trace the “*conception*” as far back through the lapse of ages as it is disclosed to us by history, we will find they were, each and all of them, among the last that entertained it. Nor was either of them the first that “*attained that end by means, good and satisfactory*” for a time, at least, to themselves and a circle of select friends who felt pride or interest in finding the means “*satisfactory.*” None, however, as far as we know, prior to Dr. Morton, attained it by “*means*” deemed “*good and satisfactory*” by the medical profession generally throughout the civilized world, and published to the world the discovery of means such as that profession generally would venture to receive and bring into use. But the world, for more than two thousand years past, has teemed with the discovery and use of various agents, clearly and indubitably possessed of anæsthetic qualities, used in some instances—many of them frequently and for a long time—with considerable reputation and success. None of them, however, prior to the introduction of the use of the vapor of sulphuric ether by Dr. Morton, were able to make its way or hold its place among an intelligent and scientific modern medical profession. A history of these anæsthetic agents, their qualities and use was not long since published by Dr. J. Y. Simpson, of Edinburg, to whose brief but elegant essay the committee of the House of Representatives who reported on this question in 1852 was largely indebted for the facts given in the historical introduction to their very able report—the following extract from which is fully to my present purpose :

Letheon Anodynes used by the Ancients.

"Intense pain is regarded by mankind, generally, as so serious an evil that it would have been strange indeed if efforts had not been early made to diminish this species of suffering. The use of the juice of the poppy, henbane, mandragora, and other narcotic preparations, to effect this object by their deadening influence, may be traced back till it disappears in the darkness of a highly remote antiquity. Intoxicating vapors were also employed, by way of inhalation, to produce the same effects as drugs of this nature introduced into the stomach. This appears from the account given by Herodotus, of the practice of the Scythians, several centuries before Christ, of using the vapor of hemp seed as a means of drunkenness. The known means of stupefaction were very early resorted to, in order to counteract pain produced by artificial causes. In executions, under the horrible form of crucifixion, soporific mixtures were administered to alleviate the pangs of the victim. The draught of vinegar and gall, or myrrh, offered to the Savior in his agony, was the ordinary tribute of human sympathy extorted from the bystander by the spectacle of intolerable anguish.

"That some letheon anodyne might be found to assuage the torment of surgical operations as they were anciently performed, cauterizing the cut surfaces, instead of tying the arteries, was not only a favorite notion, but it had been in some degree, however imperfect, reduced to practice. Pliny, the naturalist, who perished in the eruption of Vesuvius, which entombed the city of Herculaneum, in the year 79, bears distinct and decided testimony to this fact.

"It has a soporific power," says he in his description of the plant known as the mandragora or *circeius*, "It has a soporific power on the faculties of those who drink it. The ordinary potion is half a cup. It is drunk against serpents, and *before cuttings and puncturings*, lest they should be felt." (*Bibitur et contra serpentes, et ante sectiones, punctionesque, ne sentiantur.*)

When he comes to speak of the plant *eruca*, called by us the rocket, he informs us that its seeds, when drunk, infused in wine, by criminals about to undergo the lash, produce a certain calousness or induration of feeling, (*duatiam quondam contra sensum induere.*)

Pliny also asserts that the stone *Memphitis*, powdered and applied in a liniment with vinegar, will stupefy parts to be cut or cauterized, "for it so paralyzes the part that it feels no pain; *nec sentit cruciatum.*"

Antiquity of Anæsthesia.

Dioscorides, a Greek physician of Cilicia, in Asia, who was born about the time of Pliny's death, and who wrote an extensive work on the materia medica, observes, in his chapter on mandragora—

1. "Some boil down the roots in wine to a third part, and preserve the juice thus procured, and give one cyathus of it in sleeplessness and severe pains, of whatever part; also, *to cause the insensibility*—to produce the anæsthesia (*poiein anaisthesian*) of those who are to be cut or cauterized."

2. "There is prepared, also, besides the decoction, a wine from the bark of the root, three minae being thrown into a cask of sweet wine, and of this three cyathi are given *to those who are to be cut or cauterized, as aforesaid*; for being thrown into a deep sleep, *they do not perceive pain.*"

3. Speaking of another variety of mandragora, called *morion*, he observes, "medicinal men use it also for those who are to be cut or cauterized."

Dioscorides also describes the stone Memphitis, mentioned by Pliny, and says that when it is powdered and applies to parts to be cut or cauterized, they are rendered, *without the slightest danger*, wholly insensible to pain. Matthiolus, the commentator on Dioscorides, confirms his statement of the virtues of mandragora, which is repeated by Dodoneus. "Wine in which the roots of mandragora has been steeped," says this later writer, "brings on sleep, and appeases all pains, so that it is given to those who are to be cut, sawed, or burned, in any parts of their body, that they may not perceive pain."

The expressions used by Apuleius, of Madaura, who flourished about a century after Pliny, are still more remarkable than those already quoted from the older authors. He says, when treating of mandragora, "If any one is to have a member mutilated, burned, or sawed, (*mutilandum, comburendum, vel serrandum,*) let him drink half an ounce with wine, and *let him sleep till the member is cut away, without any pain or sensation, (et tantum dormiet, quosque abscindatur membrum aliquo sine dolore et sensu.)*"

Anæsthetic agents used in China centuries ago.

It was not in Europe and in Western Asia alone that these early efforts to discover some letheon were made, and attended with partial success. On the opposite side of the continent, the Chinese, who have anticipated the Europeans in so many important inventions, as in gunpowder, the mariner's compass, printing, lithography, paper money, and the use of coal, seem to have been quite as far in advance of the occidental world in medical science. They understood, ages before they were introduced into Christendom, the use of substances containing iodine for the cure of the goitre, and employed spurred rye, ergot, to shorten dangerously prolonged labor in difficult accouchements. Among the therapeutic methods confirmed by the experience of thousands of years, the records of which they have preserved with religious veneration, the employment of an anæsthetic agent to paralyze the nervous sensibility before performing surgical operations, is distinctly set forth. Among a considerable number of Chinese works on the pharma-

copæia, medicine, and surgery in the National Library at Paris, is one entitled, *Kou-kin-i-long*, or general collection of ancient and modern medicine, in fifty volumes quarto. Several hundred biographical notices of the most distinguished physicians in China are prefixed to this work. The following curious passages occur in the sketches of the biography of *Hoa-tho*, who flourished under the dynasty of *Wei*, between the years 220 and 230 of our era. "When he determined that it was necessary to employ acupuncture, he applied it in two or three places; and so with the *moxa*, if that was indicated by the nature of the affection to be treated. But if the disease resided in parts upon which the needle, *moxa*, or liquid medicaments could not operate, for example in the bones, or the marrow of the bones, in the stomach, or the intestines, *he gave* the patient a preparation of hemp, (in the Chinese language *mayo*,) and after a few moments he became as insensible as if he had been drunk or dead. Then, as the case required, he performed operations, incisions, or amputations, and removed the cause of the malady, then he brought together and secured the tissues, and applied liniments. After a certain number of days, the patient recovered, *without having experienced during the operation the slightest pain*. *Hoa-tho* has published, under the title of *Nei-tchao-thou*, anatomical plates, which exhibit the interior of the human body, which have come down to our times, and enjoy a great reputation."

It will be noticed that the agent employed by *Hoa-tho*, which he calls *ma-yo*, hemp medicine, and which is called in the annals of the latter *Hans*, *mafo-san*, or hemp essence powder, is the extract of the same plant mentioned by Herodotus, twenty-three centuries ago, *canuabis Indica*, the *haschisch* of the Arabs, which is now extensively cultivated in Hindostan, for the purpose of manufacturing the substance called *Bhang*, to produce a peculiar species of intoxication, at first seductive and delicious, but followed in its habitual use by terrible effects upon the constitution.

Almost a thousand years after the date of the unmistakable phrases quoted from Apulcius, according to the testimony of William of Tyre, and other chronicles of the wars for the rescue of the holy sepulchre, and the fascinating narrative of *Marco Polo*, a state of anæsthesia was induced for very different purposes. It became an instrument in the hands of bold and crafty impostors to perpetrate and extend the most terrible fanaticism that the world has ever seen.

Inhalation of an Anodyne Vapor in the thirteenth century.

The employment of anæsthetic agents in surgical operations, was not forgotten or abandoned during the period when they were pressed into the appalling service just described. In the thirteenth century, anæsthesia was produced by inhalation of an anodyne vapor, in a mode oddly forestalling the practices

of the present day, which is thus described in the following passage of the surgical treatise of Theodoric, who died in 1298. It is the receipt for the "*spongia somnifera*," as it is called in the rubric:

"The preparation of a scent for performing surgical operations, according to Master Hugo. It is made thus: Take of opium and the juice of unripe mulberry, of hyoscyamus, of the juice of the hemlock, of the juice of the leaves of the mandragora, of the juice of the woody ivy, of the juice of the forest mulberry, of the seeds of lettuce, of the seed of the burdock, which has large and round apples, and of the water hemlock, each one ounce; mix the whole of these together in a brazen vessel, and then in it place a new sponge, and let the whole boil, and as long as the sun on the dog days, till it (the sponge) consumes it all, and let it be boiled away in it. As often as there is need of it, place this same sponge into warm water for one hour, and let it be applied to the nostrils till he who is to be operated on (*qui incidentus est*) has fallen asleep; and in this state let the operation be performed (*et sic fiat chirurgia*.) When this is finished, in order to rouse him, place another, dipped in vinegar, frequently to his nose, or let the juice of the roots of fenigreek be squirted into his nostrils. Presently he awakens."

Prophylactic agents used during the middle ages.

Guy de Chauliac and Brunus are the only authors on medicine and surgery, besides Theodoric, who, during this period, allude to prophylactic agents to avert pain. It may be presumed, therefore, that their employment was not generally very successful. Probably bad effects, such as congestion and asphyxia, and sometimes ending in death, followed their unskillful empiricism. J. Canappe, the physician of Francis I., in his work printed at Lyons in 1535, *Le Guidon pour les Barbiers et les Chirurgiens*, the Surgeon's and Barber's Guide, describes the method of Theodoric and his followers, as already given above, and adds: "*Les autres donnent opium à boire, et font mal, spécialement s'il est jeune; et le aperçoivent, car ce est avec une grande bataille de vertu animale et naturelle. J'ai ouï qu'ilz encourent manie, et par consequent la mort.*"

Thus much is known to us of the efforts of the medical faculty in remote antiquity and during the middle ages, to destroy or mitigate pain in surgical operations—and they were attended with a certain degree of success, especially the "*spongia somnifera*" described by Theodoric, the use of which was again revived in our own times.

French experiments in 1832, exactly parallel to those of Dr. Wells' in 1844.

"A French physician, residing in the neighborhood of Toulouse, M. Dauriol, asserts that, in the year 1832, he employed a

method analogous to that of Theodorie, and specifies five cases in which he succeeded in performing painless operations."

The success of the modern revival of this ancient anæsthetic agent, appears to have been about equal to that of Dr. Wells with the nitrous oxyd. M. Dauriol says he applied it successfully and specifies five cases in which he performed operations without pain, and it may be reasonably inferred, *without previous mental preparation*. Dr. Wells performed an operation, that of extracting a tooth or teeth, on "*ten or fifteen*" persons as he says, but the first and only exhibition he made of it out of his own town was a failure, and brought him and his nostrum into ridicule. He certainly did no more in 1844 to prove the utility of *nitrous oxyd* as an anæsthetic agent, than Dauroil had done for the *spongia somnifera* in 1832. Nor did he do more to advance the general idea of anæsthesia, or to commend it to the favorable notice of the medical faculty. Nor did M. Dauriol stand alone in this department of medical science :

English use of Gases to produce insensibility in 1828.

"September 23, 1828, M. Girardin read a letter before the Academy of Medicine, addressed to his Majesty Charles X., by Mr. Hickman, a surgeon of London, in which this surgeon announces a means of performing the most delicate and most dangerous operations without producing pain in the individuals submitted to them. This proceeding consists in suspending insensibility by the methodical introduction of certain gases into the lungs. Mr. Hickman had tested his proceedings by repeated experiments on animals."

But neither of their discoveries met with any considerable success. Neither was acknowledged or adopted by the medical profession, though both had formed "*a distinct conception of anæsthesia*," and both of them "attained that end" by means "good and satisfactory" to themselves, though not to the medical profession.

Other anæsthetic agents have been tried, with some success, but never brought into general use, nor obtained the approval of an enlightened medical faculty.

"Haller, Deneux, and Blandin, report cases of operations performed upon patients under the influence of alcoholic intoxication, in obstetric and other cases, without pain; and Rieherand has suggested that this expedient should be employed in the management of dislocations difficult to be reduced. For obvious reasons it has not been adopted by the profession. Mesmerism, also, has been the subject of grave discussions, and of some extraordinary statements, in this connection; but, whatever may be thought of the individual cases certified by witnesses, it is not too much to say that it is not likely ever to become a remedy of general application."

The last named agent, MESMERISM, consists wholly, perhaps, in "*mental preparation*," which alone holds a prominent place in Dr. Wells's experiments.

Dr. Wells did not "discover" Anæsthesia.

I will now proceed to consider more particularly the subject of the alledged discovery of Dr. Wells. And whether he did, in fact, discover any thing not already known, or bring into general use, among the medical profession, a quality or a substance already known, but which had been theretofore neglected.

That he did not first discover "anæsthesia" as a condition of the human frame, or that various substances, solid, liquid, and gaseous, would produce it, is manifest from what I have already shown. The fact has been well understood from the first dawn of medical science, through all ages and at all times, down to the present day. Nor has he discovered that the property of producing anæsthesia exists in a substance not heretofore known to possess it, for, *that* property of the nitrous oxyd has been long well known. And the use to which Dr. Wells applied it, was anticipated by Sir Humphrey Davy more than half a century ago. In his researches on nitrous oxyd, p. 276, he says:

Sir Humphrey Davy described the properties of Nitrous Oxyd fifty years since.

"In one instance, when I had headache from indigestion, it was immediately removed by the effects of a large dose of gas; though it afterwards returned, but with much less violence. In a second instance, a slighter degree of headache was wholly removed by two doses of gas.

"The power of the immediate operation of the gas in *removing intense physical pain*, I had a very good opportunity of ascertaining.

"In cutting one of the unlucky teeth called *dentes sapientiæ*, I experienced an extensive inflammation of the gum, accompanied with great pain, which equally destroyed the power of repose, and of consistent action.

"On the day when the inflammation was most troublesome, I breathed three large doses of nitrous oxyd. The pain always diminished after the first four or five inspirations; the thrilling came on as usual, and uneasiness was for a few minutes swallowed up in pleasure. As the former state of mind however returned, the state of organ returned with it; and I once imagined that the pain was more severe after the experiment than before."

And on page 32:

"As *nitrous oxyd*, in its extensive operations, appears capable of destroying physical pain, it may probably be used with advantage during surgical operations in which no great effusion of blood takes place."

So that Dr. Wells could claim no originality in the discovery or conception of anæsthesia, or of the fact that nitrous oxyd, as well as many other substances, would produce it.

And I have also as clearly shown that he was not the first to apply anæsthesia to destroy pain in surgical operations. The practice was familiar with ancients. The northern and eastern nations, as well as the Greeks and Romans, understood and practised it, and the preparation of the anæsthetic agent was a familiar head in the dispensatories of the middle ages, and the practice was not entirely abandoned in modern times. Mr. Girardin recommended it in 1828. M. Danriol used it in surgical operations in 1832.

So, also, did Hallena, Denwin, and Blandia; in short, the preceding pages show clearly that Dr. Wells had no claims as the originator of æsthesia, or as having been (to use the words of the writer of the "Examination") *the first being upon whom an anæsthetic operation was performed.*

The next proposition we shall discuss is, that—

The experiments of Dr. Wells did not advance the discovery.

The testimony showing the truth of this assertion may be best considered by distributing it according to its applicability to the following cardinal points, viz:

1st. That of the anæsthetic agents, known or unknown to the scientific world, he selected one which is *certain, safe, and effectual.*

2d. *That he so applied it as to satisfy the medical profession of its utility.*

3d. *And that he so published it as to bring it into general use.*

Now, I appeal to all candid and impartial men, I submit to an intelligent public, whether in the then state of medical science as I have shown it, these three conditions were not necessary to constitute a just title to the honor and reward which is here claimed.

I will now proceed to an examination of the evidence, and endeavor to ascertain, therefrom, whether *any* or *all* of these conditions were fulfilled by Dr. Wells.

Total absence of any publication until Dr. Morton's success was known.

And, in the first place, it is worthy of remark that, in the case of Dr. Wells, we have not one stroke of pen or pencil by him, either in a private memorandum, friendly letter, or published essay, in which he claims to have had any knowledge, or to have made any use of *sulphuric ether*, prior to his letter of December 7th, 1846, at which date America and Europe rang with the fame of the then new discovery, of its perfect anæsthetic qualities. Nor does he in that letter claim to have done any thing more than to have thought of it, spoken of it to Dr. Marcy, and, by

his advice, to have rejected it. But in his letter published in *Galignani's Messenger*, of February 7, 1847, he says: "Since this discovery was made, I have administered the nitrous oxyd and sulphuric ether to about fifty patients," leaving it to be inferred by a cursory reader, but by no means saying that he tried sulphuric ether before it was brought into public use by Dr. Morton. This equivocal statement of Dr. Wells, if it be understood to extend to the use of sulphuric ether prior to September 30, 1846, is supported only by the testimony of John G. Wells, taken within the present winter. He says:

"On this occasion sulphuric ether was administered by Dr. Wells. I am quite sure it was early in 1845, a long time anterior to the period when Dr. Morton, of Boston, first announced his discovery. The ether was unpleasant in its effects, though the tooth was extracted without pain. I therefore advised my friends not to use it, but rather the exhilarating gas."

Claim in 1853 that Dr. Wells had used Ether, refuted by Dr. Wells himself in 1847.

But this testimony is subject to several difficulties—1st. Dr. Wells, in publishing his discovery December 7th, 1846, does not pretend to have ever administered sulphuric ether.

2d. This same witness testified in March, 1847, and does not pretend, in his then testimony, that sulphuric ether was ever administered to him. His deposition is as follows:

HARTFORD, *March 26, 1847.*

I hereby testify that, more than two years prior to this date, on being informed that Horace Wells, dentist, of this city, had made a valuable discovery, by which means he could extract teeth without pain to the patient, which consisted in the use of stimulating gas, or vapor, I inhaled the exhilarating gas, and under its influence, had six extracted without the least pain. I would further state, that for more than eighteen months from the time I first submitted to this operation by the application of gas, I heard no other name mentioned as the discoverer, except that of the above-named Horace Wells.

J. GAYLORD WELLS,
184 $\frac{1}{2}$ Main street.

3d. And Dr. Wells, on his return from Europe in 1847, distinctly stated to Professor Hayward that he never had operated on a subject under the influence of sulphuric ether. Dr. Hayward said, in answer to to interrogatory:

16th. Did you have a conversation with Dr. Horace Wells, of Hartford, on the subject of anæsthesia? If yea, when, and who was present? Please give the whole conversation.

Ans. He called at my house after his return from France; after we had begun to use the ether as an anæsthetic. There was no one present but Dr. Wells and myself. It was in my

study. I then asked him if he had ever used sulphuric ether by inhalation, so as to render any one insensible to pain, and performed any surgical operation on the individual while in that state. His answer was that he had not.

Again: Dr. Wells in his letter of February 7, 1847, to *Galigani's Messenger*, says:

"The less atmospheric air admitted into the lungs with, any gas or vapor, the better; the more satisfactory will be the result of the operation."

From this it is evident he knew nothing of the properties or use of sulphuric ether. It will not support respiration, and the patient who should breathe it without a mixture of atmospheric air, would be instantly suffocated to death. Dr. Wells could never have used it, for if he had, he would have killed his patient.

An assertion to the effect that he had so used it prior to his letter of December 7, 1846, would have been entitled to no credit in the face of that letter, but he does not make it, and it would perhaps be doing him injustice to suppose that, by his vague and indefinite language, he intended it should be so understood. It is, however, sufficient for the purpose of this inquiry that there is neither assertion or proof that he even tried an experiment with *sulphuric ether* prior to Dr. Morton's discovery, September 30th, 1846; that he thought of it, and spoke of it, if it be conceded that he did so, prior to that time, is a matter of no importance. Nor if he in fact made experiments with sulphuric ether, does it amount to any thing more than this: that he *discredited it instead of approving it, as an anæsthetic agent*. He does not intimate in either of his letters that he communicated his conception as to sulphuric ether, if any such he then had to either Dr. Morton or Dr. Jackson. Dr. Wells, therefore, is entitled to nothing so far as merit depends upon discovering and making public the use of sulphuric ether as a safe, certain, and effectual anæsthetic agent. His claims are therefore necessarily limited to his development of the anæsthetic properties of nitrous oxyd, and to the use which he made of that agent and the introduction into public use while he gave it.

Dr. Wells's experiments confined to Nitrous Oxyd.

On this particular agent he wrote and published nothing prior to December 7, 1846, when there had been made known to and received by the world at large an acknowledged safe, certain, and efficient anæsthetic agent—sulphuric ether—then he wrote and set up his claim; I give it at length in his own words.

From the Hartford Courant.

HARTFORD, December 7, 1846.

MR. EDITOR: You are aware that there has been much said of late respecting a gas, which, when inhaled, so paralyzes the

system as to render it insensible to pain. The Massachusetts General Hospital have adopted its use, and amputations are now being performed without pain. Surgeons generally, throughout the country, are anxiously waiting to know what it is, that they may make a trial of it, and many have already done so with uniform success. As Drs. Charles T. Jackson and W. T. G. Morton, of Boston, claim to be the originators of this invaluable discovery, I will give a short history of its introduction, that the public may decide to whom belongs the honor.

While reasoning from analogy, I was led to believe that the inhaling of any exhilarating gas, sufficient to cause a great nervous excitement, would so paralyze the system as to render it insensible to pain, or nearly so, for it is well known that when an individual is very much excited by passion, he scarcely feels the severe wound which may at the time be inflicted, and the individual who is said to be "dead drunk," may receive severe blows, apparently without the least pain, and when in this state is much more tenacious of life than when in the natural state. I accordingly resolved to try the experiment of inhaling an exhilarating gas myself, for the purpose of having a tooth extracted. I then obtained some nitrous oxyd gas, and requested Dr. J. M. Riggs to perform the operation, at the moment when I should give the signal, resolving to have the tooth extracted before losing all consciousness. This experiment proved to be perfectly successful—it was attended with no pain whatever. I then performed the same operation on twelve or fifteen others, with the same results.

I was so much elated with the discovery, that I started immediately for Boston, resolving to give it into the hands of proper persons, without expecting to derive any pecuniary benefit therefrom. I called on Drs. Warren and Haywood, and made known to them the result of the experiments I had made. They appeared to be interested in the matter, and treated me with much kindness and attention. I was invited by Dr. Warren to address the medical class upon the subject at the close of his lecture.

I accordingly embraced the opportunity, and took occasion to remark that the same result would be produced, let the nervous system be excited sufficiently by any means whatever; that I had made use of nitrous oxyd gas, or protoxyd of nitrogen, as being the most harmless. I was then invited to administer it to one of the patients, who was expecting to have a limb amputated.

I remained some two or three days in Boston for this purpose, but the patient decided not to have the operation performed at that time. It was then proposed that I should administer it to an individual for the purpose of extracting a tooth. Accordingly, a large number of students, with several physicians, met to see the operation performed—one of their number to be a patient. Unfortunately for the experiment, the gas bag was by mistake

withdrawn much too soon, and he was but partially under its influence when the tooth was extracted. He testified that he experienced some pain, but not as much as usually attends the operation. As there was no other patient present, that the experiment might be repeated, and as several expressed their opinion that it was a humbug affair, (which, in fact, was all the thanks I got for this gratuitous service,) I accordingly left the next morning for home. While in Boston I conversed with Drs. Charles T. Jackson and W. T. G. Morton upon the subject, both of whom admitted it to be entirely new to them. Dr. Jackson expressed much surprise that severe operations could be performed without pain, and these are the individuals who claimed to be the inventors.

When I commenced giving the gas, I noticed one very remarkable circumstance attending it, which was, that those who sat down resolving to have an operation performed under its influence, had no disposition to exert the muscular system in the least, but would remain quiet as if partially asleep. Whereas, if the same individuals were to inhale the gas under any other circumstances, it would seem impossible to restrain them from over exertion.

I would here remark, that when I was deciding what exhilarating agent to use for this purpose, it immediately occurred to me that it would be best to use nitrous oxyd gas, or sulphuric ether. I advised with Dr. Marcy, of this city, and by his advice I continued to use the former, as being the least likely to do injury, although it was attended with more trouble in its preparation. If Drs. Jackson and Morton claim that they are something else, I reply that it is the same in principle if not in name, and they cannot use anything which will produce more satisfactory results; and I made these results known to both of these individuals more than a year since.

After making the above statement of facts, I leave it for the public to decide to whom belongs the honor of the discovery.

Yours, truly,
HORACE WELLS, *Surgeon Dentist.*

Dr. Wells's first object in this paper was to present his own claims; they were fresh and recent, and his mind was in a fit condition to appreciate them fully; it is reasonable, therefore, to suppose that he presented them in all their length and breadth—and in it he does not pretend that he had ever used or tried sulphuric ether as an anæsthetic agent. It is safe, therefore, to conclude that he never had. His second object, connected with the first, was to depreciate the claims of Drs. Morton and Jackson, whom he then considered as his rivals. We see by his last paragraph, that he was aware that Dr. Morton was using sulphuric ether as an anæsthetic agent, but he does not pretend that it had ever been used by any other person for the like purpose. It is

safe, therefore, to conclude that it had not, within his knowledge. He says that he suggested it to Dr. Marcy, who advised against its use, so he continued the use of nitrous oxyd. This first paper is something nearer the time of his experiments, and also something nearer the truth, than that published in *Galighani's Messenger*—yet a careful examination of *this* will show that it is very far from containing a true presentation of the actual facts as they occurred.

Dr. Wells "took his idea" from Dr. Cooley.

And, first. One, on reading that paper, would be led to suppose that Dr. Wells was brought to the opinion of the anæsthetic properties of nitrous oxyd, and his choice of that element as a means of producing anæsthesia, by an elaborate process of inductive reasoning; whereas, in truth, he took it from the suggestion of Dr. Samuel A. Cooley, made to him during an exhibition of the "laughing gas." I repeat the paragraph of Dr. Wells's letter, that the evidence may be applied to it the more closely:

"While reasoning from analogy, I was led to believe that the inhaling of any exhilarating gas, sufficient to cause a great nervous excitement, would so paralyze the system as to render it insensible to pain, or nearly so—for it is well known that when an individual is very much excited by passion, he scarcely feels the severe wound which may at the time be inflicted, and the individual who is said to be 'dead drunk' may receive severe blows, apparently without the least pain, and when in this state is much more tenacious of life than when in the natural state. I accordingly resolved to try the experiment of inhaling an exhilarating gas myself, for the purpose of having a tooth extracted. I then obtained some nitrous oxyd gas, and requested Dr. J. M. Riggs to perform the operation at the moment when I should give the signal, resolving to have the tooth extracted before losing all consciousness. This experiment proved to be perfectly successful—it was attended with no pain whatever. I then performed the same operation on twelve or fifteen others, with the same results."

On this particular point, in a deposition given at the request of the representatives of Dr. Wells, Dr. Cooley says:

"STATE OF CONNECTICUT, }
County of Hartford. }

"I, Samuel A. Cooley, a citizen of Hartford, county of Hartford, State of Connecticut, depose and say, that on the evening of the 10th day of December, in the year 1844, that one G. Q. Colton gave a public exhibition in the Union Hall in the said city of Hartford, to show the effect produced upon the human system by the inhaling of nitrous oxyd or laughing gas; and, in accordance with the request of several gentlemen, the said Colton did give a

private exhibition on the morning of December 11, 1844, at the said hall; and that the deponent then inhaled a portion of said nitrous oxyd gas, to ascertain its peculiar effect upon his system; and that there were present at that time the said Colton, Horace Wells, C. F. Colton, Benjamin Moulton, and several other gentlemen, to the deponent at this time unknown; and that the said deponent, while under the influence of the said gas, did run against and throw down several of the settees in said hall, thereby throwing himself down, and causing several severe bruises upon his knees and other parts of his person; and that, after the peculiar influence of said gas had subsided, his friends then present asked if he had not injured himself, and then directed his attention to the acts which he had committed unconsciously while under the operation of said gas. He then found by examination that his knees were severely injured; and he then exposed his knees to those present, and found that the skin was severely abraded and broken; and that the deponent then remarked 'that he believed that a person might get into a fight with several persons and not know when he was hurt, so unconscious was a person of pain while under the influence of the said gas;' and the said deponent further remarked, 'that he believed that if a person could be restrained, that he could undergo a severe surgical operation without feeling any pain at the time.' Dr. Wells then remarked 'that he believed that a person could have a tooth extracted while under its influence, and not experience any pain;' and the said Wells further remarked 'that he had a wisdom tooth that troubled him exceedingly, and if the said G. Q. Colton would fill his bag with some of the gas, he would go up to his office and try the experiment,' which the said Colton did; and the said Wells, C. F. Colton, and G. Q. Colton, and your deponent, and others at this time unknown to said deponent, proceeded to the office of said Wells; and that said Wells there inhaled the gas, and a tooth was extracted by Dr. Riggs, a dentist then present; and that the said Wells, after the effect of the gas had subsided, exclaimed 'A new era in tooth-pulling!'

On the same point G. Howell Olmstead, Jr., says:

"In answer to your question, I would state that I wish to render justice to all parties concerned. Having been connected in business with Dr. Wells, and being very intimate with him, we had a great many conversations together about the effect of the gas, and in those conversations he always told me he derived his first idea of the matter from remarks made by Dr. S. A. Cooley, at a private exhibition of laughing gas, given at the Union Hall, in this city, in the winter of 1844 or 45; and that, from those remarks, and what he witnessed himself, he immediately applied it to his own business."

But enough of this, I do not use it to depreciate the experiments of Dr. Wells, for if the idea which he attempted to carry

out, and the means used by him were really worth anything in his hands, it is of no importance where he got them, but I refer to it to show that his statement of his own case cannot be relied on for full and perfect accuracy.

In his letter, published in *Galignani's Messenger*, of February 17, 1847, he makes a still wider and less excusable departure from the strict and exact fact. After stating the discovery and the performance of an operation on himself and twelve or fifteen others, he says :

"Being a resident of Hartford, Connecticut, (U. S.,) I proceeded to Boston the following month, (December,) in order to present *my discovery* to the medical faculty—first making it known to Drs. Warren, Hayward, Jackson and Morton, two last of whom subsequently published *the same*, without mention of our conference. Since this discovery was first made I have administered nitrous oxyd gas and the vapor of ether to about fifty patients, my operations having been limited to this small number in consequences of a protracted illness which immediately ensued on my return home from Boston, in January, 1845."

Now it is not at all true that either Dr. Jackson or Dr. Morton "*published the same*," that is to say, Dr. Wells' discovery of, or experiments on the anæsthetic properties of nitrous oxyd, either with or without mentioning their conversation with him. But they published, as he well knew, a very different thing, a discovery which each of them claimed to have made; namely—*that sulphuric ether was a safe, certain, and efficient anæsthetic agent*, and they each claimed, as his own, the introduction of the discovery into use, and approval with the medical profession. He seems willing also to convey the idea that he had used sulphuric ether as an anæsthetic agent prior to September 30, 1846, the date of Dr. Morton's public announcement of this discovery; but, as I have already shown, it is not true that he did so. Dr. Wells says, in this paper, that his operations were limited to a small number of cases "in consequence of a protracted illness, which immediately ensued on my return home from Boston, in January, 1845." This is not strictly true if it be given as the whole cause of his limited operations.

Dr. Wells proclaims his experiment a failure, and abandons Anæsthesia.

Dr. Samuel A. Cooley says that he conversed with him just after his return "from Boston, where he had made an experiment which had proved a failure." The witness says :

"He then said to me that he was disappointed in the effects of the gas, and that it would not operate as we had hoped and thought it would, as there was no certainty to be placed upon it; and, consequently, he should abandon it, as he had so much other business to attend to, and as the gas would not operate in all cases alike, and therefore could not be trusted."

So that, although he may have been ill, in the year 1845, he had made up his mind to abandon his supposed discovery as a failure, from the time of his unsuccessful experiment in Boston, until the wonderful success and eclat of Dr. Morton's anæsthetic agent, sulphuric ether, led him to hope that he would be able to contest with him the honor of the discovery.

Mrs. Wells, who has testified in support of her deceased husband's claim, says:

"For some months previous to the delivery of a course of chemical lectures by Mr. G. Q. Colton, in the city of Hartford, December, 1844, Dr. Wells had turned his attention to the discovery of some means of rendering the human system insensible to pain under dental and surgical operations, and made several experiments in mesmerism with reference to that object."

And P. D. Stillman says:

"About the year 1844, I was frequently in Dr. Wells's room; he was making experiments—some in mesmerism—also in gas."

Success of Nitrous Oxyd dependent on Mesmerism.

And it is well known that about that time the world was full of exactly that kind of experiment. Dr. Wells appears to have connected mesmerism in practice with the nitrous oxyd, making out of the elements of both the principal means by which he brought about whatever success he in fact attained.

"When I commenced giving the gas, I noticed one very remarkable circumstance attending it, which was, that those who sat down resolving to have an operation performed under its influence, had no disposition to exert the muscular system in the least, but would remain quiet as if partially asleep. Whereas, if the same individuals were to inhale the gas under any other circumstances, it would seem impossible to restrain them from over exertion."

And Dr. Marcy, one of the principal witnesses in support of Dr. Wells' claim, in his statement No. 4, speaking of one of Dr. Wells' experiments, says:

"By this experiment, two important, and to myself, entirely new facts, were demonstrated: 1st, that the body could be rendered insensible to pain, by the inhalation of a gas or vapor, capable of producing certain effects upon the organism; and 2d, when such agents were administered to a sufficient extent, for a definite object, and with a suitable impression being previously produced upon the mind, that no unusual mental excitement, or attempts at physical effort, would follow the inhalation."

And there is no doubt whatever that in slight operations, such as those of dentistry, that the mentally prepared patient, who has a right understanding with the operator, can by the force of im-

agination and a strong effort of the will greatly modify the proper physical effect of an agent such as this. Hence the undoubted success in many cases of *mesmerism* when used alone in surgical operations.

That Dr. Wells had a full appreciation of this great philosophic truth is clear, from his parting advice to Dr. Cooley, from whose insensibility to pain when under the influence of the "laughing gas," he originally obtained his conception of *anæsthesia*. Dr. Cooley in his second statement says, in reference to a partnership into which he and Dr. Wells had entered—

"Ans. 6. The first intimation I had that Dr. Wells did not intend to carry out our partnership arrangement with me, was when he informed me, several weeks after this arrangement was entered into between us, that he had just returned from Boston, where he had made a public experiment which had proved a failure. He then said to me that he was disappointed in the effects of the gas, and that it would not operate as we had hoped and thought it would, as there was no certainty to be placed upon it; and, consequently, he should abandon it, as he had so much other business to attend to, and as the gas would not operate in all cases alike, and therefore could not be trusted. He advised me to go on with my exhibitions, and thought I could make money out of them, and that, although he had got through with his experiments in the business, he would assist me in any way he could, in order that I might succeed in my lectures; and suggested to me to connect with my lectures and administering the gas, mesmerism, and the use of a card of questions which he had prepared—so arranged that a correct answer could be given, by a person in an adjoining room, as to the time of day, &c., by the particular manner in which the question was asked. Feeling some confidence that by following his suggestions I should realize sufficient from the lectures to reimburse me for my time and expenses while in company with him, the matter was then dropped between us, and I pursued my lectures."

And it is not at all surprising, that an anæsthetic agent, which required for its successful exhibition mesmerism or other mental preparation of the patient, should fail when tested in the Medical Hospital of Massachusetts. Dr. Riggs expresses the opinion, in one of his numerous statements, that if the Medical Hospital, which does so much honor to the city of Boston, had, with all its learned Professors, been placed in Hartford, Dr. Wells would have been the recognised discoverer of anæsthesia; and nitrous oxyd would have been the great anæsthetic agent. It strikes me as much more probable, if that noble institution, with its learned Professors, had been in Hartford, that the nitrous oxyd, if it had appeared for a moment, as an anæsthetic agent, would not have lived out its one short month, but that it would at an earlier day have met the fate which it did meet at its first appearance in that hospital. Dr. Wells testifies to the kindness and attention of the

Professors. Dr. Morton aided him with his instruments in his experiments, and there can be no just pretence of partiality or unfairness. His experiment there, by his own admission, was a failure, and he therefore determined to abandon the use of this gas as uncertain and unreliable.

Dr. Wells notoriously relinquishes his experiments in January, 1845.

That he did abandon it is understood. His first publication after he returned from Europe, March 30, 1847, does not claim to have used it after his failure in Boston, but apologizes for his omission to do so. He says:

"The question is asked, why so much time has elapsed since its first discovery, without its coming into more general use, I can only say, that I have used my utmost endeavors, from the first, to influence physicians and surgeons to make a trial of it, assuring them that my operations were numerous, and perfectly successful. But all were fearful of doing some serious injury with it; and not wishing to incur the responsibility of administering this powerful agent without the co-operation of the medical faculty, and also for the reason that I was obliged to relinquish my professional business in consequence of ill health, my operations have been somewhat limited."

Dr. Wells was afraid to administer the nitrous oxyd without the "co-operation of the medical faculty." But they would not co-operate. Of them he says: "*All were fearful of doing some serious injury with it.*" That is true. So they were, and so they would be now if its use were again proposed. The medical faculty are, as a body, *cautious*, but not *timid*. They were afraid to use nitrous oxyd, lest they should do serious injury with it; but they were not afraid to use sulphuric ether when its anæsthetic qualities were made known to them. They received the announcement of its discovery with shouts of exultation; there was an end of *pain*, and end of *mesmerism* as a pain subduing agent; and it was at once received into universal use by the medical faculty.

And the witnesses speak of it as a thing understood, that Dr. Wells ceased his experiments and gave up the pursuit until after the time the discovery of Dr. Morton had obtained universal use and celebrity.

Dr. Ellsworth, speaking of his failure in Boston in the winters of 1844-5, says:

"He presented it to Dr. Warren, who laid it before his class, but the experiment first attempted partially failing, and no one seeming willing to lend him an helping hand, he ceased making any further personal efforts."

Dr. Cooley says:

"I knew of Dr. Wells going to Boston, soon after the noise in the papers of the discovery of the effects of ether by you, in 1846,

and had a conversation with him, on his return, about your discovery. He made no claim to me of the discovery being his; but, on the contrary, expressed regrets that we had not continued our experiments to a successful termination."

Howell Olmstead, junr., says :

"During the winter of 1845 and spring of 1846, Dr. Wells made application for a patent for a 'shower bath,' in his name, which Col. Thos. Roberts claimed to be equally interested in. Their respective claim was left to the decision of Francis Parson, Esq., of this city, and decided in Dr. Wells' favor. I then made arrangements with Dr. Wells to travel and dispose of rights to manufacture his baths, and at that time I considered that he had abandoned the thing entirely, as he expressed himself to me that the operation in some cases proved a perfect failure, and spoke of his unsuccessful trial in Boston in 1845. * * * *

"About this time the effects of ether had become public in Boston, and he expressed himself as being very sorry that he had not prosecuted his experiments to a successful termination; and he also regretted his stopping the matter when he did, for he thought an immense fortune might be made out of the business, and that the discovery would reflect great honor upon the discoverer."

Dr. Wells cordially recognises Dr. Morton's discovery.

It is very certain too, that Dr. Wells, at the time Dr. Morton's discovery was communicated to him, and thereafter, until the assured success of that discovery astonished, and overwhelmed him, recognised the kind and friendly acts of Dr. Morton toward himself, and did not conceive himself injured by Dr. Morton's having made and claimed the honor of discovering a safe and practical anæsthetic agent. Witness his letter to Dr. Morton of October, 1846, in reply to one of Dr. Morton, informing him of his discovery and his advice to Dr. Morton, given in the presence of R. H. Eddy. They are as follows:

"HARTFORD, CONNECTICUT, October 20, 1846.

"DR. MORTON—*Dear Sir*: Your letter dated yesterday, is just received, and I hasten to answer it, for I fear you will adopt a method in disposing of your rights, which will defeat your object. Before you make any arrangements whatever, I wish to see you. I think I will be in Boston the first of next week—probably Monday night. If the operation of administering the gas is not attended with too much trouble, and will produce the effect you state, it will, undoubtedly, be a fortune to you, provided it is rightly managed.

"Yours, in haste,

H. WELLS."

Here follows the statement of R. H. Eddy, Esq., as to the interview between Drs. Morton and Wells:

Interview between Drs. Morton and Wells.

"BOSTON, February 17, 1847.

"R. H. DANA, Esq—*Dear Sir:* In reply to your note of this morning, I have to state that about the time I was engaged in preparing the papers for the procural of the patent, in the United States, on the discovery of Dr. Morton for preventing pain in surgical operations, by the inhalation of the vapor of sulphuric ether, I was requested by Dr. Morton to call at his office to have an interview with the late Dr. Horace Wells, who was then on a visit to this city, and who, Dr. Morton thought, might be able to render him valuable advice and assistance in regard to the mode of disposing of privileges to use the discovery. Accordingly I had an interview with Dr. Wells. During such meeting we conversed freely on the discovery, and in relation to the experiments Dr. Wells had been witness to in the office of Dr. Morton. The details of our conversation I do not recollect sufficiently to attempt to relate them, but the whole of it, and the manner of Dr. Wells at the time, led me, in no respect, to any suspicion that he (Dr. Wells) had ever before been aware of the then discovered effect of ether in annulling pain during a surgical operation. Dr. Wells doubted the ability of Dr. Morton to procure a patent—not on the ground that he (Dr. Morton) was not the first and original discoverer, but that he (Dr. Wells) believed the discovery was not a legal subject for a patent. He advised him, however, to make application for one, and to dispose of as many licenses as he could while such application might be pending; in fact, to make as much money out of the discovery as he could, while the excitement in regard to it might last. I must confess that when, some time afterwards, I heard of the pretensions of Dr. Wells to be considered the discoverer of the aforementioned effect of ether, I was struck with great surprise, for his whole conversation with me, at the time of our interview, led me to the belief that he fully and entirely recognized the discovery to have been made by Dr. Morton, or at least partly by him and partly by Dr. C. T. Jackson, as I then supposed.

"Respectfully yours,
R. H. EDDY."

From this letter, and from the conversation above detailed, it is clear that Dr. Wells not only did not feel himself wronged by Dr. Morton, but that he did not think himself in possession of an available anæsthetic agent. He could not fail to know, and on his return home he declared he did know that Dr. Morton's "compound" was sulphuric ether, and his conversation on this occasion also shows that he did not then claim to have been the discoverer of its application as an anæsthetic agent.

Further recognition of Dr. Morton's discovery by Dr. Wells.

It shows, also, that he thought Dr. Morton's discovery as well as his own, a humbug, though he does not say so. He was apprised that Dr. Morton was about to apply for a patent, and he did not believe he would get one. He advised him to sell licenses while his application was pending, and make as much money out of it as he could while the excitement lasted—very like the advice which he gave to Dr. Cooley as to the use he should make of the nitrous oxyd. He was evidently impressed with the belief that the success of Dr. Morton's anæsthetic agent depended, also, to some extent, on the mental preparation of the patients.

Dr. Wells and friends lose all confidence in Nitrous Oxyd,

But I am prepared to show, beyond all cavil, that neither Dr. Wells nor Dr. Riggs, nor Dr. Marcy, had any confidence in nitrous oxyd as an anæsthetic agent. They did not believe it to be *efficient*, and at the same time, *safe*. They had used it only in dental operations prior to the discovery of Dr. Morton, and they were satisfied, that in those operations, it ought not to be used.

The Hon. James Dixon, an intelligent man—a member of Congress, and the friend and advocate of Dr. Wells, thus testifies:

Ques. Did you ever have a conversation with Dr. Wells in regard to the use of nitrous oxyd, in which he discouraged its use by you in having teeth extracted; if so, state fully the conversation?

Ans. I had repeated conversations with Riggs and Wells. Think both said that for so slight an operation as pulling teeth they would not advise its use, but that in severe surgical operations, as amputation, it should be used, but in slight operations it was not best to run the risk of using the gas.

Mr. Dixon was a man whose life and health were of value, it would not do, therefore, to overdose him with nitrous oxyd, lest it should superinduce asphyxia. He was an intelligent man, who could not by previous mental discipline be induced to feel no pain, or pretend that he felt none, under the influence of a moderate and safe inhalation; those gentlemen, therefore, both advised him, and I have no doubt honestly and well, that "in slight operations" as pulling of teeth, "it was not best to run the risk of using the gas," and there was not much probability of his calling on them to administer it "in a severe surgical operation," but if he had so called, I have no doubt they would both, as honestly, and more decisively, have advised him against its use. Indeed, in some few cases, in slight operations, and on probably peculiar constitutions, the operation of the gas appears to have been successful and innocent. But we have here the distinct avowal of both Drs. Wells and Riggs, that they did not consider it generally so, but thought its effects ought not to be hazarded

except in severe surgical operations. Why did they not tell all their customers so? If they had done this the writer of the "Examination" might, with some show of propriety, have talked of their "sincerity, rectitude, truth, and honor."

Entertaining the opinions which they did entertain, and which, when consulted by an intelligent man and a friend, they both expressed, how could these men hold out the false pretence which they were then holding out to the public? How dare they administer their dangerous nostrum to patients, who, though perhaps poor and ignorant, have human feelings and human souls, and who relied the more fully because of their own want of knowledge, on the truth of their physicians, and trusted their own lives and health, and the lives and health of their wives and children the more implicitly in their hands? It seems, however, that they could do so, and yet, in the opinion of the writer of the "EXAMINATION," be men of "sincerity, rectitude, truth, and honor."

Mr. Dixon was not mistaken in his recollection, nor is he, on another occasion, much nearer the time of its occurrence, detailed a similar conversation with Dr. Wells to Mr. Edward Warren, who testifies to it as follows:

Further proof that Dr. Wells had abandoned the use of Nitrous Oxyd.

"1st. Do you recollect a conversation in Washington with Hon. James Dixon? When and what was it?

"Ans. While in Washington, endeavoring to induce our Government to introduce this discovery into the army in Mexico, and after getting the matter referred to a select committee of the House of Representatives, I learned with some surprise, that the Hon. James Dixon, a member of Congress from Connecticut, and townsman of Dr. Wells, had sent in a sort of informal protest to the committee's further proceedings, until a constituent of his, Dr. Wells, had furnished certain testimony in his favor. This was early in January. I immediately called on Mr. Dixon, who stated that Dr. Wells had requested his assistance, and had promised to furnish him certain evidence of his claims; but, having gone to Europe without procuring it, he did not think it would arrive at all, and, if not by a certain day, then near at hand, he would aid me in my efforts; at the same time saying, as near as I can recollect, that, about two years before, he had heard that Dr. Wells was making some experiments with nitrous oxyd gas, to prevent pain in extracting teeth; that, having a severe toothache, he called on him, proposing to take this gas, but that Dr. Wells informed him that, after giving it to thirteen or fourteen patients, with only partial success, he had abandoned its use as dangerous, and dissuaded him from resorting to it."

Nitrous Oxyd discredited as an Anæsthetic agent by Dr. Wells's experiments.

Dr. Marey, with whom Dr. Wells counselled much, and who operated in and reported the operation on the scirrous testicle above referred to, under the influence of the nitrous oxyd, and certifies to the success of the operation, entertained the same opinion with Doctors Wells and Riggs. He did not believe that nitrous oxyd was at the same time safe and efficacious as an anæsthetic agent. In an article published in the Journal of Commerce, December 30, 1846, when the medical world was active with Dr. Morton's discovery, he says:

"My own opinion in regard to the use of the nitrous oxyd gas, the sulphuric ether, or an other stimulant, which acts upon the system in such a manner as to render the body insensible to external impressions, is, that it is decidedly unsafe, and that in no given case can we be certain that it will not cause congestion of the brain or lungs. I have known the use of both the first named articles to give rise to temporary congestion of the brain and insanity."

He was so well satisfied that nitrous oxyd was a failure, that he could have no faith in *any anæsthetic agent*.

The state of the discovery then stands thus: On the 7th day of December, 1846, two months after Dr. Morton's announcement, Dr. Wells claims to have administered the nitrous oxyd as an anæsthetic agent in twelve or fifteen ordinary cases of dentistry, at Hartford. He formed the opinion, and he expressed it to the Hon. Mr. Dixon, that *it was dangerous* and ought not to be used in such slight cases. His nearest and most intimate friend and supporter, Dr. Riggs, expressed the same opinion. Dr. Wells had tried it once in the Medical Hospital of Boston—it proved a failure. On his return to Hartford he told Dr. Cooley, with whom he had agreed to form a partnership for its use, that "it would not operate as we hoped and thought it would, as there was no certainty to be placed in it; and consequently he should abandon its use," and he did abandon it and go into other business; dealing in patents for sifters for coal ashes; bath-tubs, and finally dealing in pictures. Not more than one or two cases of his use of the nitrous oxyd in tooth pulling is even doubtfully proved after his return from Boston, in the winter of 1844-'45; and except in the case of his exhibition at Boston he had never extended its use beyond the circle of his own friends in the city of Hartford; and if he, or any of the small circle of friends who took their opinions on the subject from him, thought or said anything about *sulphuric ether*, it was merely to pronounce it inferior to nitrous oxyd for the purpose of anæsthesia.

Now let us suppose that all he did, and all he thought, and what he said on this subject to his confidential friends, as far as we have been able to gather it from the evidence, had been laid at

once before the medical profession of America and Europe, would they have received it; would they have been justified in receiving it as a discovery of practical anæsthetic qualities in nitrous oxyd? Would they, as the professional and trusted protectors and preservers of human life and human health have been justified in bringing it at once into general use in their practice? A negative answer to these questions, and a negative they must have, *answers away Dr. Wells' claim.* Anæsthesia generally had gained nothing by his experiments, they did not stand as well as the reported experiments of Mr. Daunol with the ingredients of the *spongi somnifera*. Nitrous oxyd did not stand as well in his hands as it did when it came out of the hands of Sir Humphry Davy. Dr. Wells did not prove that nitrous oxyd was a *safe, certain, and efficient anæsthetic agent*, and he did not reasonably satisfy the medical profession that it was so. On the contrary, he proved to his own satisfaction that it was not either certain, efficient, or safe, and the only instance in which he presented it to a medical public out of his own circle of private friends was that in the Medical Hospital at Boston, where it was considered a "*humbug*." This is all that Dr. Wells had done for anæsthesia prior to the discovery by Dr. Morton; and the public announcement of that discovery, and its universal and enthusiastic reception by the learned medical faculties of Europe and America.

Attempt to rival Sulphuric Ether by a revival of Nitrous Oxyd.

Subsequent to that time a faint effort was made by Doctor Wells and a few of his professional friends in Hartford, to revive the use of *nitrous oxyd* as an anæsthetic agent—to extend its use and make it a rival to *sulphuric ether*—evidently with the hope of being able to connect subsequent experiments, if they could make them successful, with the past, which so far failed that they were abandoned, and of the two to make out *the first available discovery*. Dr. Cooley in answer to interrogatories, says:

"Ques. You say, moreover, that you administered gas when requested so to do by surgeons and dentists. Was not this subsequent to the ether discovery?

"Ans. 8. Yes, it was after the ether discovery, in 1846, that I administered the gas for surgeons and dentists—there then being an attempt, by us all, to renew the experiments, as the public and ourselves had lost confidence and doubted the practicability of the thing, until the successful introduction of ether. I administered gas for Dr. Ellsworth, an intimate friend of Wells, and also to several others."

Second failures of Dr. Wells in attempting to introduce Nitrous Oxyd.

The first attempt of which we have any proof, beyond the slight operation of pulling teeth, for which Dr. Wells had, as already shown, condemned its use, was by Dr. E. Marcy, on the

17th of August, 1847. He pronounces the operation successful. It was in its nature a very brief one—the removal of a scirrous testicle. This patient, he says, did, at the first incision, manifest some pain, but afterwards, till the operation ended, there was not the slightest consciousness. Dr. Wells administered the gas. The object of the experiment with the *gas*, was to make it a rival of *sulphuric ether*, already established in the profession. It was intended to make and prove a case—a foregone conclusion in the minds of all present except the *subject* of the operation; from him we hear nothing. If prudence had dictated it, his certificate or affidavit might have been taken; but it was not. Dr. Taft, however, forgetting the slight manifestation of pain testified to by Dr. Marcy, says the part was removed *without pain* to the patient.

The next in the order of time, is the case of Goodale, whose thigh was amputated by Dr. Ellsworth on the 1st of January, 1848, in the presence of Drs. Hall and Hawley. Dr. Wells administered the gas.

Dr. Ellsworth commences his report of the case with an apology: "The lad was in a very unpleasant state of mind, being greatly alarmed at the number of persons standing round, yet ten or twelve inspirations rendered him perfectly quiet." He had *sensation* during the sawing of the bone, but Dr. Ellsworth thinks it was not pain. The effect of the gas went off before the operation was completed; the lad complained bitterly, and the gas had to be again administered, which made him quiet. On the whole, Dr. Ellsworth thinks it a favorable operation.

Dr. Hall says, "*the boy during the operation was entirely quiet*," and he thinks the operation "very successful." In this he does not agree with Dr. Ellsworth, unless in his opinion the whole operations consisted in lopping off the limb. Dr. Hawley says "this operation was performed with, apparently, little suffering by the boy; and on inquiry after the operation, he replied that he felt no pain when the limb was amputated." The boy's certificate or affidavit was not originally taken by Dr. Wells, but he was afterwards examined in behalf of Dr. Morton, and testified as follows:

Ques. What is your residence, age, and occupation?

Ans. I reside in East Hartford, my age nineteen years, am a cigar maker.

Ques. Have you had a leg amputated, by whom and when, and was anything administered to you to prevent pain, if yea, when and by whom?

Ans. I had a leg amputated by Dr. Ellsworth, I think 1st of January, 1848; something was given me to prevent pain by Dr. Wells, I inhaled it from a bag.

Ques. How many times did you inhale from the bag?

Ans. Twice.

Ques. Will you state whether Ellsworth requested Dr. Wells to give it again because you were in much pain?

Ans. He did.

Ques. What did Dr. Wells say when Dr. Ellsworth requested him to give more gas?

Ans. He said he thought it would not be best as I was too weak to have any more.

Ques. Did Dr. Wells decline giving any more?

Ans. He did.

His deposition was again taken in behalf of Dr. Wells' representatives January 25, 1853, and is as follows:

Deposition of Henry A. Goodale, of Hartford, Connecticut.

"I, Henry A. Goodale, of Hartford, being of lawful age, depose and say: That I resided in East Hartford in 1848, at which time, on the 1st January, my leg was cut off by Dr. Ellsworth in the presence of Dr. E. Hall, Dr. H. Wells, Henry Kilbourn, and others, but I do not remember who at the exact time of the operation. Dr. Wells gave the gas out of a large bag. I was afraid in first to take the gas, but finally was persuaded so to do. Do not remember being taken up and brought to the edge of the bed. Remember seeing the knife, but not until the operation was over. Do not remember when the knife entered the flesh, did not remember when the knife was cut out, think I felt a kind of jar when the bone was sawed. Do not remember when Dr. Ellsworth cut off the large nerve, but remember taking gas several times. Was not sensible of suffering during the cutting and sawing. When Dr. E. began to sew up the wound it hurt me a great deal, and I asked for the gas, do not know whether more was given or not. I felt pain after the leg was taken off while it was being dressed, and after I was put back into bed. Do not think that I felt any pain until the leg was off. Am sure I was a great deal better off for taking the gas, than I should have been otherwise. I think the gas was given twice and refused once when I asked for it. I think some one said I was too weak to bear any more; this was while the stitches were being taken. Do not remember with certainty who said I was too weak. I stated in a former deposition, if I remember right, in reply to the question, "whether I experienced pain during the whole operation," that I did. I think this has been misunderstood, for I did not mean that I experienced pain continually during the operation, but merely that during the operation there was a time when I experienced pain, and that was during the dressing and tying the arteries, meaning the time after the leg was removed, but not the whole time when Dr. E. began to cut until the stump was done up, but only during the part as before expressed toward the close, during the dressing and tying the arteries.

"HENRY A. GOODALE."

Hartford, January 25, 1853.

Sworn before

H. L. RIDER, N. P.

The whole case, as reported and proved, shows what may be not inaptly called a bungling operation. The anæsthesia was imperfect, and not continuous—the boy had sensation and suffered pain—and Dr. Wells was evidently afraid, and with good reason, so to administer the gas as to make insensibility perfect, and he dared not continue it to the close of the operation.

The next and last case was that of Mary Gabriel, to whom Dr. Wells administered "the gas," and from whose right shoulder Dr. S. B. Berresford removed a fatty tumor weighing $6\frac{1}{2}$ ounces. We have the affidavit of the patient: a perfect state of anæsthesia was produced, closely bordering on asphyxia, and she felt no pain; but Dr. Berresford, who is evidently a friendly though an honest witness, testifies thus:

Ques. Was the above operation as successful and satisfactory as any you have ever performed with any other anæsthetic agent?

Ans. It was quite as successful as any, so far as destroying sensibility was concerned.

Ques. You say the operation you have spoken of was quite as successful as any you ever performed, so far as destroying sensibility was concerned. In what was the operation not as successful?

Ans. The patient was very faint and depressed for about half an hour after recovering her perception.

Ques. Was not the administration of the gas in this case attended with asphyxia?

Ans. I think not.

Ques. What was the appearance of the face of the patient?

Ans. At this distance of time I cannot remember, to speak with precision.

Ques. Have you any idea that Dr. Wells ever perfected, and brought into general use, nitrous oxyd gas as an anæsthetic agent in surgical operations?

Ans. No, sir; I do not think he did.

Ques. Is nitrous oxyd, in your judgment, a valuable anæsthetic agent in surgical operations?

Ans. I have never used it, but in the case above alluded to, and give a decided preference to chloroform, in surgical operations.

Dr. Berresford saw the danger of the inhalation of nitrous oxyd until anæsthesia became perfect; and although he thinks asphyxia was not produced in this case, yet he never used the nitrous oxyd again, nor did any one else—that was the end of its career as an anæsthetic agent. It had run the race of its second revival, and was a second time discredited and abandoned.

The proof of this is inherent in the transaction itself, as I have briefly sketched it; but there is also extrinsic evidence of the fact.

Cyrrel Bullock says:

Ques. Have you ever seen nitrous oxyd administered for the purpose of extracting teeth? If yea, about what time, by whom, and where, and was it successful?

Ans. I have, about the year 1846 or 1847, at the house of Mr. P. Holt, in this city, by S. A. Cooley. It was not successful. It was administered that I might extract some teeth, but it did not produce insensibility, and I did not extract the teeth.

Ques. What was the effect produced on the patient?

Ans. She appeared wild and restless.

Dr. Cooley says:

“The last time that I exhibited it was to a lady at Dr. Greenleaf’s office, which, in a great measure, proved a failure, and then ether and chloroform assumed the place of the gas, and operations were more successful in the use of them; and since then I have had but little to do with the matter, as other business has taken up my time and attention.”

And Dr. Greenleaf says of that exhibition:

Ques. Have you ever made use of nitrous oxyd gas in your dental business, to prevent pain in extracting teeth?

Ans. No, sir.

Ques. Have you ever seen it administered; and, if so, by whom, and where?

Ans. I saw it administered once, by Dr. S. A. Cooley, which produced vomiting. This was at my office.

Ques. Was the experiment entirely unsuccessful?

Ans. Yes.

And this was the end.

I have thus hastily sketched the process of reasoning which has brought me to the opinion which I have already announced, as to the respective claims of Dr. Wells and Dr. Morton, to the honor of having given to his country and the world a *safe, certain, and efficient* anæsthetic agent. I could have wished to go more fully and minutely into the examination of the question, but the near approach of the close of the session, and the consequent pressure of business upon me, admonish me that I must have done. And I am gratified to be able to refer, in support of the leading opinion which I have expressed, to the appended memorial signed by a list of names in the medical and surgical profession which would do honor to any age or any country.

Refutation of personal abuse in the “Examination.”

Before concluding, however, justice demands a vindication of the character of Dr. Morton, libelled and villified as it is by the author of the “Examination,” and of this I will merely say:

That the IXth head of the publication and the statements therein contained, so far as they impeach the integrity and propriety of

the conduct of Dr. Morton, or impute to him an attempt to silence the Wells claim by money, *are false*. Of this I am assured by the persons whose names are vouched to substantiate the charges; but as it will, doubtless, be a subject of future investigation, it is not *my* province to enter upon it, even did time permit.

Equally false are the assertions in the "Examination," that the letter from Dr. Wells, dated October 20, 1846, was improperly obtained from him, and then printed in 1852, from a copy furnished by Dr. Morton, which differed in a material point from the original. His letter itself, was filed by the representatives of Dr. Wells, from which the copy in the report was printed, the committee themselves comparing it with the proof sheets.

Another paragraph, on page 80, shows that the writer entirely lost sight of the truth, in attempts to invest his arguments with spurious strength, derived from an unhallowed alliance with slanderous invective. Dr. Wells, we are informed, "perished by his own hand, in a paroxysm of insanity, induced, as many of his friends believe, by the excitement and irritation of this controversy with Morton." Now, files of the New York papers show that the unfortunate man committed suicide in a prison cell, to which he had been committed for throwing vitriol upon the daughters of shame who promenade Broadway. Yet his death is now unhesitatingly laid at the door of Dr. Morton, with an envenomed effrontery rarely witnessed, which has invited this statement of unfortunate truths.

In this same paragraph, after having thus outrageously defied the dictates of truth and respect to the memory of the dead, the writer indulges in one of the phantasies which his partisan imagination delights to conjure up. "Dr. Wells," we are informed, "did not live to receive the cheering news of the final recognition of his claims by the highest medical authority of Europe." What was this tribunal? The Institute of France, (which awarded to Dr. Morton its largest gold medal)—the famed Medical College at Paris—or one of the similar institutions in other large cities? Not at all. We find on the preceding page a statement that the recognition came from the "Parisian Medical Society"—a simple unchartered society, formed a few years since by English and American students, (with a few exceptions,) who united themselves in a foreign land to rehearse their exploits at the dissecting table, and to accustom themselves to converse about their profession. And it is this social club which the author of the "Examination" magnifies into "the highest medical authority in Europe." Arguments like these, which have no foundation save in the positive imagination of their coiner, show the real weakness of the cause they are intended to sustain, backed by gross libels and defamatory charges.

It is in vain to attempt success by depreciating the character or capacity of Dr. Morton. He is recognised wherever known, as a man of integrity and honor, of great enterprise and of high

capacity. Conscious of his original claim to this glorious discovery, he has decidedly asserted his rights when necessary, amidst sore buffetings of fortune, and the close-cleaving malignity of powerful adversaries, certain that he would eventually receive a universal recognition of his position. Institutions, learned men, and able jurists, both at home and abroad, have gradually united in awarding to him the glory of a discovery that will solace his declining years, and impart to his memory a hallowed radiance, as a benefactor of the human race. He proposed to the select committee (as his printed memorials on the files of the Senate show) a *projet* of the bill now reported, referring the subject to the decision of a judicial tribunal, and has ever avowed his readiness—in the noble language of De Foe—"to stand or fall by the public justice of his native land."

MEMORIAL
OF THE
SURGEONS AND PHYSICIANS
OF THE
MASSACHUSETTS GENERAL HOSPITAL,
AT BOSTON,
AND
MEMBERS OF THE MASSACHUSETTS MEDICAL SOCIETY,
IN SUPPORT OF
THE CLAIM OF W. T. G. MORTON, M. D.,
FOR
THE DISCOVERY OF ETHERIZATION.

*To the Honorable the Senate and House of Representatives
of the United States in Congress assembled:*

The undersigned hereby testify to your honorable bodies that, in their opinion, Dr. William T. G. Morton first proved to the world that ether would produce insensibility to the pain of surgical operations, and that it could be used with safety. In their opinion his fellow-men owe a debt to him for this knowledge. Wherefore, they respectfully ask a recognition by Congress of his services to his country and mankind.

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 Joel Spalding, M. D.
 David Wells, M. D.
 Charles A. Davis, M. D.
 Ployer G. Kittredge, M. D.
 Daniel Holt, M. D.
 Daniel Moore, M. D.
 J. W. Scribner, M. D.
 Geo. W. Santom, M. D.
 Wm. D. Lamb, M. D.
 David Dana, M. D.
 J. H. Morse, M. D.
 James Howarth, M. D.
 W. H. Kimball, M. D.
 Thos. R. Boutelle, M. D.
 Levi Pillsbury, M. D.
 T. W. Wadsworth, M. D.
 W. M. Barrett, M. D.
 Henry M. Linrab,
 James L. Hunt, M. D.
 Winslow Warren, M. D.
 Benjamin Hubbard, M. D.
 Timothy Gordon, M. D.
 Jeremy Stimson, M. D.
 D. P. Wight, M. D.

E. J. Learned, M. D.
 Elisha Huntington, M. D.
 John W. Graves, M. D.
 Joel Spalding, M. D.
 H. Pillsbury, M. D.
 P. P. Campbell, M. D.
 L. B. Morse, M. D.
 Ezra Stephenson, M. D.
 H. F. Spear, M. D.
 Robert T. P. Fiske, M. D.
 Ebenezer Woodward, M. D.
 William G. Pattee, M. D.
 W. Goddard, M. D.
 Andrew Nichols, M. D.
 Joseph Osgood, M. D.
 David A. Grosvenor, M. D.
 George Osgood, M. D.
 James C. Briggs, M. D.
 Chandler Flagg, M. D.
 Daniel Gill, M. D.
 W. C. Boyden, M. D.
 Charles Haddock, M. D.
 Ingalls Kithredge, M. D.
 Isaac P. Smith, M. D.
 C. H. Hildreth, M. D.
 Geo. W. Smith, M. D.
 Benjamin Haskell, M. D.
 Lemuel Gott, M. D.
 Oscar D. Abbott, M. D.
 Henry Bigelow, M. D.
 Cyrus K. Bartlet, M. D.
 Simon Whitney, M. D.
 Allston W. Whitney, M. D.
 Francis Leland, M. D.
 Theodore O. Cornish, M. D.

PETITION

OF THE

TRUSTEES OF THE MASSACHUSETTS GENERAL HOSPITAL

*To the Honorable the Senate
and House of Representatives in Congress assembled:*

The subscribers respectfully represent that they are members of the Board of Trustees of the Massachusetts General Hospital; that the power of the inhalation of sulphuric ether to produce insensibility to pain during surgical operations, was discovered by experiments instituted in this hospital by Dr. William T. G. Morton, and that in their opinion he is entitled to a liberal national reward for the service thus rendered to the country and to mankind.

N. I. Bowditch,
John P. Bigelow,
W. S. Bullard,
Francis C. Lowell,
Thomas Lamb,
Amos A. Lawrence,

Wm. J. Dale,
Ed. Wigglesworth,
Charles H. Mills,
J. Thos. Stevenson,
G. A. Shaw.

BOSTON, November 22, 1852.

*With the Author's
Compliments*

THE ORATION

DELIVERED BEFORE

THE MEDICAL SOCIETY OF LONDON,

MARCH 8, 1854.

